


**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No. 132250-, Hall County **OFFICE** Preconstruction
STP00-1238-00(007)
SR 52 from 1 Mile North of SR 365
To South of Julian Wiley Road **DATE** September 8, 2008

FROM  Cynthia Rice-Singleton, Assistant Director of Preconstruction
TO *ra* SEE DISTRIBUTION

SUBJECT APPROVED REVISED PROJECT CONCEPT REPORT

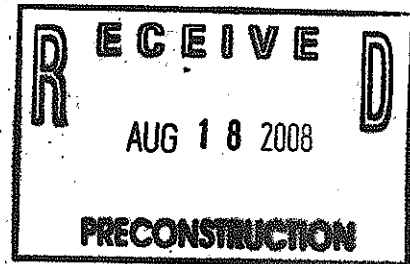
Attached for your files is the approval for subject project.

Attachment

DISTRIBUTION:

Brian Summers
Glenn Bowman
Ken Thompson
Michael Henry
Keith Golden
Paul Liles
Robert Mahoney
Russell McMurry
BOARD MEMBER

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**




INTERDEPARTMENT CORRESPONDENCE

FILE STP00-1238-00(007), Hall County
PI #132250
SR 52 from 1 mile north of SR 365
to south of Julian Wiley Road

OFFICE Gainesville

DATE July 14, 2008


FROM Robert Mahoney, P.E., District Preconstruction Engineer

TO Genetha Rice-Singleton, Assistant Director of Preconstruction

SUBJECT Revised Project Concept Report

Attached is the Revised Concept Report as well as a Reduced Cost Alternatives Report for your further handling and approval in accordance with the Plan Development Process (PDP). This revised concept is being submitted due to the elimination of the passing lanes and an increase to the paved roadway shoulder width from 2 feet to 6.5 feet as required by Chapter 6, Table 6.5 "Typical Lane and Shoulder Widths" of the GDOT Design Policy Manual. Also, the 6.5 ft paved shoulder will provide accommodations for the Gainesville-Hall County MPO Bicycle and Pedestrian Plan's future bicycle route along SR 52.

In September, 2001 the Concept Report was approved which included a bridge replacement on new alignment and passing lanes construction. In October, 2007 a consultant was hired to restart the design process. The first step was to determine if the concept approved in 2001 was still valid. The consultant performed a concept validation exercise, developing three new alternatives as well as a "No Build". After preparing a Concept Validation Report which included a cost matrix and an evaluation chart, the original concept from 2001 was validated as the best option (Report available in PCC Common, "Neil Kantner", PI # 132250, Concept Validation Report).

However, due to recent GDOT budget constraints, we felt obligated to explore any other ways to reduce the cost. At this point, a Reduced Cost Alternative Report was prepared which offered two new alternatives; a bridge replacement only in-place and a bridge replacement only on new alignment, both alternatives are without passing lanes (report attached). The in-place alternative has a basic cost estimate of \$12.6 million. This alternative would require processing a 4(f) document and mitigation costs could be very high. The other alternative, bridge replacement on new alignment, which has a basic cost estimate of \$15.3 million is recommended by the District and offers an \$8.6 million cost reduction compared with the originally approved concept. This alternative rectifies the worst geometric condition within the original project limits, eliminates 4f impacts to Lula Park, is compatible for the possibility of future passing lane construction and offers improved constructability by being constructed on new alignment.

The District recommends and presents for approval a revised project concept that consists of a rural typical section with two 12 foot lanes with 10 foot shoulders, 6.5 foot paved and a 1,000 foot long bridge with 8 foot shoulders. The proposed project will be on new alignment beginning approximately 0.7 miles north of SR 365 crossing the Chattahoochee River 1,700 feet north of the current bridge crossing and terminating at a point 0.3 miles north of the Chattahoochee River. The project length will be 1.3 miles.

The revised concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Program (RTP) and/or the State Transportation Improvement Program (STIP).

DATE

8/14/08


State Transportation Planning Administrator

RWM:DMF

Attachments

- Revised Project Concept Report
- Reduced Cost Alternatives Report

Distribution:

Glenn Bowman, State Environmental/Location Engineer
Angela Alexander, State Transportation Planning Administrator
Jamie Simpson, State Financial Management Administrator
Brian Summers, Project Review Engineer
Paul Liles, State Bridge Design Engineer
Keith Golden, State Traffic Safety and Design Engineer

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
District 1**

**REVISED PROJECT CONCEPT REPORT
STP00-1238-00(007) – HALL COUNTY**

Need and Purpose: SR 52 is a major collector route from the SR 365 area to points west in the Hall/White County areas. The existing bridge over the Chattahoochee River was built in 1955 and consists of concrete bents, steel girder superstructure, and a concrete deck. The original design load capacity is H-15. The sufficiency rating on the structure is currently 42.29, and the bridge is classified as Functionally Obsolete and requires widening. In a memo dated 4-19-01 from the State Maintenance Engineer, it was recommended that the bridge be replaced due to unacceptable load capacity which is in accordance with GDOT policy 2405-1. Due to these criteria no additional cost analysis or coring by the lab will be required. SR 52 in the area of the project is rolling/mountainous and has steep grades along with a tightly curved alignment and a high percentage of truck traffic, 15% in 2008 (up from 8% in 2001). Traffic is projected to be 5,500 VPD and 9,000 VPD in the years 2008 and 2028 respectively. The combination of heavy truck traffic and two long inclines increases platooning, increases delay, and reduces roadway capacity. These conditions result in a drop in the level of service. The design speed is 55 MPH.

Project location: The proposed concept is located along SR 52 beginning approximately 0.7 miles north of SR 365 to a point 0.3 miles north of the Chattahoochee River. The total length of the project is approximately 1.3 miles. Project STP00-1238-00(007) is located entirely in Hall County.

Description of the approved concept: The Concept Report was approved in September, 2001 and combined a Bridge Replacement project, BRST-1238(8) and a Passing Lanes project, STP-1238(7) into one project STP00-1238-00(007).

Project Number STP-1238(7) proposed to construct a 1.15 mile southbound passing lane beginning 1.0 mile north of SR 365 on SR 52. This section also proposes to relocate SR 52 on new location east of the existing alignment, cross the Chattahoochee River, and tie into existing SR 52 just north of the existing bridge. A second passing lane begins just north of the proposed bridge and will construct a 1.35 miles northbound passing lane to a point 0.3 miles south of CR 994/Julian Wiley Road. The proposed construction will provide three, 12' lanes with 10' rural shoulders 2' paved on variable 100' – 200' of proposed right of way.

Project Number BRST-1238(8) proposed to construct a new 1,000' x 44' concrete bridge over the Chattahoochee River on new alignment east of the existing bridge structure.

PDP Classification: Major _____ Minor X

Federal Oversight: Full Oversight (), Exempt(X), State Funded(), Other ()

Functional Classification: Major Collector

U. S. Route Number(s): N/A

State Route Number(s): 52

Traffic (AADT) as shown in the approved concept:

Current Traffic
Year: 2008 AADT: 5500

Design Traffic
Year: 2028 AADT: 9000

Proposed features to be revised: The typical section is proposed to be revised to have two 12' lanes, 10' rural shoulders with 6.5' paved for the full length of the project. The passing lanes are recommended to be removed. Also the 44' bridge width is proposed to be revised to 40' consisting of two 12' travel lanes and 8' shoulders.

Describe the revised feature(s) to be approved:

- **Typical Section:** It is recommended that the two passing lanes be eliminated. The existing roadway geometry will be improved along the section with the most adverse geometry (beginning of the project to new bridge location) which will improve traffic flow characteristics. The steep existing grades of up to 10.0 % will be reduced to a maximum of 6.0 % thus improving truck speeds in the uphill direction. The removal of the existing sharp curves will also improve sight distance and eliminate the reduced speed limit of 35 mph posted in the vicinity of the curves. The 2.0' paved shoulder on the roadway section is recommended to be revised to a 6.5' paved shoulder as required by chapter 6, Table 6.5 "Typical Lane and Shoulder Widths" of the GDOT Design Policy Manual. Also the 6.5' paved shoulder will provide accommodations for the Gainesville-Hall County MPO Bicycle and Pedestrian Plan's future bicycle route along SR 52. It is recommended that the bridge shoulder be revised from 10.0' to 8.0' for a total gutter to gutter width of 40'. The bridge shoulder width recommendation is consistent with new GDOT bridge criteria.

Updated traffic data (AADT):

Current Traffic
Year: 2013 AADT: 7982

Design Traffic
Year: 2033 AADT: 16013

Programmed/Schedule:

P.E. September 2007

R/W: March 2010

Construction: March 2011

VE Study Required Yes(X) No()

Revised cost estimates:

- | | |
|--|---------------|
| 1. Construction cost including E&C, (Inflation not included) | \$ 11,690,228 |
| 2. Right-of-Way | \$ 3,666,503 |
| 3. Utilities | \$ 0.0 |

Is the project located in a Non-attainment area? X Yes No.

Recommendation: It is recommended that the proposed revision to this concept be approved for implementation.

Attachments:

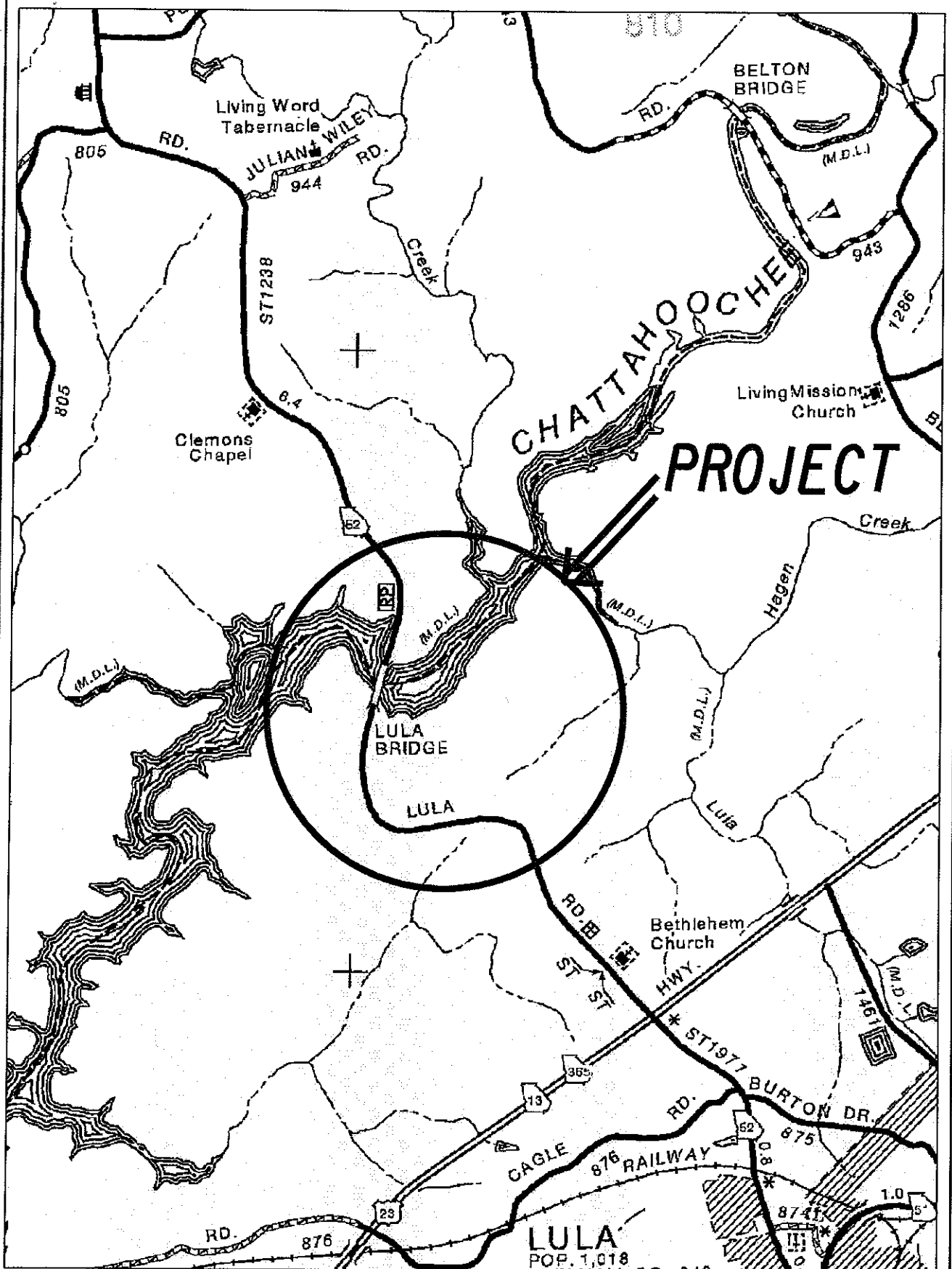
1. Location Map
2. Typical Section
3. Construction Cost Estimate
4. Right of Way Cost Estimate

Concur:

Todd Long *for* *for*
Todd Long, P.E., Director of Preconstruction

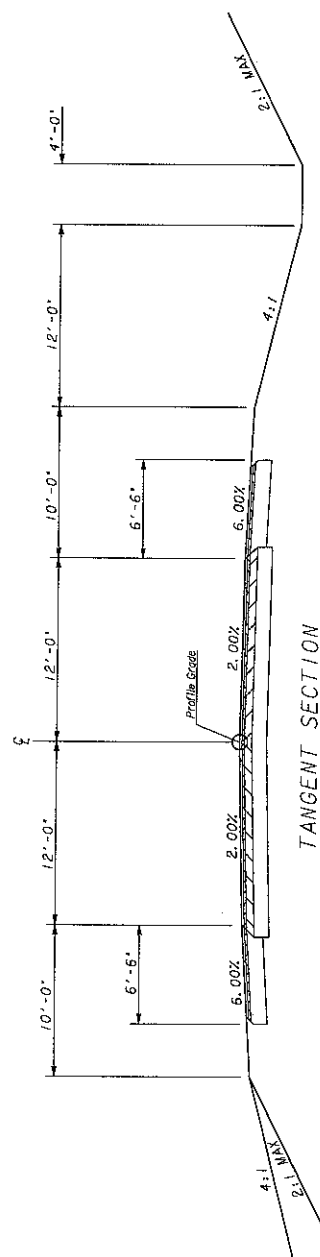
Approve:

Gerald Ross
Gerald Ross, P.E., Chief Engineer



LOCATION MAP

PROJECT NO. : STP00-1238-00(007), HALL COUNTY



STP00-1238-00(007)
P. 1. NO. 132250

TYPICAL SECTION

Estimate Report for file "STP00-1238-00(007)"

Section Roadway					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	LS	30000.00	TRAFFIC CONTROL -	30000.00
153-1300	1	EA	71117.80	FIELD ENGINEERS OFFICE TP 3	71117.80
201-1500	1	LS	400000.00	CLEARING & GRUBBING -	400000.00
210-0100	1	LS	3660911.00	GRADING COMPLETE -	3660911.00
318-3000	200	TN	23.24	AGGR SURF CRS	4648.00
432-5010	500	SY	1.68	MILL ASPH CONC PVMT, VARIABLE DEPTH	840.00
433-1000	395	SY	153.28	REINF CONC APPROACH SLAB	60545.60
610-1055	500	LF	2.71	REM GUARDRAIL	1355.00
641-1100	100	LF	45.20	GUARDRAIL, TP T	4520.00
641-1200	2500	LF	15.79	GUARDRAIL, TP W	39475.00
641-5001	6	EA	620.25	GUARDRAIL ANCHORAGE, TP 1	3721.50
641-5012	6	EA	1819.10	GUARDRAIL ANCHORAGE, TP 12	10914.60
Section Sub Total:					\$4,288,048.50

Section Pavement					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
310-1101	14000	TN	22.05	GR AGGR BASE CRS, INCL MATL	308700.00
402-1812	300	TN	69.22	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	20766.00
402-3121	8000	TN	63.93	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	511440.00
402-3130	2000	TN	65.23	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	130460.00
402-3190	2700	TN	63.61	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	171747.00
413-1000	2600	GL	1.93	BITUM TACK COAT	5018.00
Section Sub Total:					\$1,148,131.00

Section Drainage					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
999-2010	1	LS	341000.00	DESIGN COMPLETE	341000.00
Section Sub Total:					\$341,000.00

Section Erosion					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
999-2010	1	LS	262000.00	DESIGN COMPLETE	262000.00
Section Sub Total:					\$262,000.00

Section Signing and Marking					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
999-2010	1	LS	20000.00	DESIGN COMPLETE	20000.00
Section Sub Total:					\$20,000.00

Section Bridge					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
540-1101	1	LS	200000.00	REMOVAL OF EXISTING BR, STA NO -	200000.00
541-0001	1	LS	4368300.00	CONSTR OF BRIDGE	4368300.00
Section Sub Total:					\$4,568,300.00

Total Estimated Cost: \$10,627,479.50**Subtotal Construction Cost \$10,627,479.50**

E&C Rate 10.0 % \$1,062,747.95

Inflation Rate 0.0 % @ 0 Years \$0.00

Total Construction Cost	\$11,690,227.45
Right Of Way	\$3,666,503.00
ReImb. Utilities	\$0.00

Grand Total Project Cost	\$15,356,730.45
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Preliminary Right of Way Cost Estimate

Date: June 23, 2008

Project: STP00-1238(007) HALL

P.I. Number: 132250

Existing/Required R/W: 150 to 380 feet / varies

No. Parcels: 12

Project Termini: From 0.70 mile north of SR 365 to 1.6 miles south of Julian Wiley Road

Project Description: SR 52 from 0.70 mile north of SR 365 to 1.6 miles south of Julian Wiley Road

Land:

Commercial	0 s.f @ \$	/s.f. = \$	
Industrial	0 s.f @ \$	/s.f. = \$	
Residential	414,700 s.f @	\$1.00 /s.f. =	\$414,700
Agricultural	1,621,300 s.f @	\$0.50/s.f. =	<u>\$810,650</u>
TOTAL			<u>\$1,225,350</u>

Improvements:

2 Homes	\$400,000
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Relocation:

Commercial @ \$25,000/parcel	0 =	\$0
Residential @ \$40,000/parcel	2 =	<u>\$80,000</u>

TOTAL	<u>\$480,000</u>
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Damages:

Proximity -	\$0
Consequential -	\$0
Cost to Cure -	<u>\$0</u>

TOTAL	<u>\$0</u>
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SUB-TOTAL:	<u>\$1,705,350</u>
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Net Cost	\$1,705,350
Scheduling Contingency 55 %	\$937,943
Adm/Court Cost 60 %	\$1,023,210

TOTAL	<u>\$3,666,503</u>
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Total Cost

\$3,666,503

Prepared By:

John F. Fabel

Reviewed / Approved:

Howard P. Copeland
R/W Administrator

Note: Accuracy of estimate is the sole responsibility of the Preparer.

Note: The Market Appreciation(40%) is not included in this Preliminary Cost Estimate.

REVISED: 12-8-06